

REMARKS/ARGUMENTS

This Amendment is in response to the Final Office Action mailed January 8, 2010. Before this Amendment, claims 1-3, 5-7, and 9-11 were pending in this application. In this Amendment, claims 1, 5-7, and 9 have been amended, no claims are canceled, and no new claims are presented. After entry of this Amendment, which is respectfully requested, claims 1-3, 5-7, and 9-11 will still be pending. Reconsideration of the rejected claims is respectfully requested. The claims have only been amended to ensure compliance with 35 U.S.C. § 101 and § 112, and the amendments to the claims do not raise new issues requiring further search and/or consideration.

I. IMPROPER FINALITY OF FINAL OFFICE ACTION

A. No Explanation For Rejections Of Dependent Claims

An office action should not be made final if it does not explain its rejection of each claim. This Office Action and the previous office action did not explain rejections of claims 6-7, 2-3, and 10-11.

Claims 6-7. No reasons for rejecting claims 6-7 under 35 U.S.C. § 103 were given in the Office Action. In the § 103 section on page 14 of the Office Action states:

As for dep. claims 6-7 (part of 5 above), which deal with the features of the task and computing availability of the servers, these are taught in FONG et al /BEHRENS ET AL /PRASANNA as

(incomplete paragraph in original). The Office Action has no further discussion of claims 6-7. It appears as though the Examiner's arguments were inadvertently omitted from the paragraph. This (i.e., the same incomplete paragraph) had also occurred in the previous office action (mailed 7/23/2009), and the apparent error was pointed out by the Applicants on pp. 8-9 of the Applicants' previous response (10/23/2009 amendment). In any case, because the Office Action does not state the reasoning for its § 103 rejections of claims 6-7, the finality of the Office Action should be withdrawn.

Claims 2-3 and 10-11. No reasons for rejecting claims 2-3 or 10-11 under 35 U.S.C. § 103 were given in the Office Action. Page 14 of the Office Action states:

As for independent method claims 1-3, which are the respective method claims to carry out the system claims 5-7 above, they are rejected for the same reasons set forth in the rejections of claims 5-7 above.

As for method claims 9-11, which appear to be the respective method claims to carry out the system claims 5-7 above, they are rejected for the same reasons set forth in the rejections of claims 5-7 above.

(emphases omitted). Because the subject matter of dependent claims 6-7 was not addressed under the § 103 section, the subject matter of corresponding dependent claims 2-3 and 10-11 was not addressed. Because the Office Action does not state the reasoning for its § 103 rejections of these claims, the finality of the Office Action should be withdrawn.

B. New Ground Of Rejection Not Necessitated By Applicants' Amendment Or An IDS

An office action should not be made final if an examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims, nor is based on information submitted in an information disclosure statement (IDS) (MPEP 706.07(a)). In this case, Applicants' amendments in the previous amendment addressed 35 U.S.C. § 101 issues and not substantive issues under 35 U.S.C. §§ 102 or 103. For example, the sole amendment to claim 1 was "determining, using a processor operatively coupled to the computer servers, an expected computing time" In this Office Action, the Examiner added Behrens et al. (US 7,082,401) as a reference in his § 103 rejections. Behrens is cited by the Office Action for a demand forecast model having a single top level mode with a plurality of branches directly emanating therefrom (Office Action pp. 12-13). This is clearly unrelated to the amendment. Furthermore, no IDS has been submitted. Therefore, because the new ground of rejection (based on Behrens) was neither necessitated by the amendment or an IDS, the Office Action should not have been made final.

For at least the above reasons, Applicants respectfully request that the Examiner withdraw finality of the Office Action (see MPEP 706.07(d)) and issue a supplemental office action that explains his reasons for the rejections of the dependent claims, or in the alternative indicates allowance of subject matter in the claims.

II. CLAIM REJECTIONS UNDER 35 U.S.C. § 101

The Office Action rejected claims 1-3 under 35 U.S.C. § 101. The Examiner suggested tying the “allocating each branch” and “distributing the task” operations of claim 1 to a processor. Applicants thank the Examiner for the suggestion and have amended the claim to recite “using the processor” in the applicable operations.

The Office Action rejected claims 5-7 under 35 U.S.C. § 101 because they are allegedly directed to more than one class of statutory subject matter. The Office Action proclaims, without citation, that using any other claim format than “configured to” or “means for” in an apparatus claim may not be proper and should not be given the same interpretation of the machine claim (Office Action p. 8). Although Applicants take issue with this interpretation of the law, Applicants have amended claims 5-7 to recite “configured to” in order to expedite prosecution of the patentable subject matter in this application.

For at least the above reasons, Applicants request withdrawal of the § 101 rejections of the claims and all claims depending therefrom.

III. CLAIM REJECTIONS UNDER 35 U.S.C. § 112 ¶ 2

The Office Action rejected claims 5-7 under 35 U.S.C. § 112 paragraph 2 for indefiniteness because it was allegedly unclear how the claims were framed under the statutory classes. Applicants believe in good faith that the amendments to claims 5-7 discussed above ensure that the claims comply with § 112 ¶ 2. For at least these reasons, Applicants respectfully request withdrawal of the § 112 ¶ 2 rejections of the claims.

IV. CLAIM REJECTIONS UNDER 35 U.S.C. § 102

The Office Action claims 5-7 under 35 U.S.C. § 102(a) as being anticipated by Wolf et al. (US 6,374,297) (hereinafter “Wolf”).

In order for a claim to be anticipated, a single prior art reference must describe, either expressly or inherently, each and every element as set forth in the claim. Applicants traverse the rejections because the cited reference fails to disclose all of the limitations set forth in the claims.

For example, claim 5 recites:

5. (Currently amended) Computer system for allocating to at least two computer servers a demand forecast application, the system comprising:
at least two computer servers, and
a computer manager **[executing instructions in a computer program, the computer program instructions comprising:
program code configured to determine an expected computing time for each branch of a plurality of branches of a demand forecast tree having a single top level node with the plurality of branches directly emanating therefrom;
program code configured to allocate each branch of the plurality of branches to a task of a plurality of tasks based on the expected computing time for the branch, such that a total expected computing time for each task is substantially equal, wherein the total expected computing time for a task of the plurality of tasks is determined by adding the expected computing time for each branch that is allocated to the task; and
program code configured to, for each task, distribute the task to a computer server of the at least two computer servers and executing the task on the computer server.]**

(emphasis added).

The Office Action explicitly admitted ignoring the subject matter in brackets (boldfaced above), alleging that it held no patentable weight (Office Action p. 10). Applicants believe in good faith that the amendments described above ensure that the subject matter in the brackets is afforded patentable weight. As such, Wolf does not disclose, teach, or suggest the highlighted limitations.

Although Wolf discloses load balancing among computer servers, Wolf fails to disclose “program code configured to determine an expected computing time for each branch of the plurality of branches of [a] demand forecast tree” as recited. Instead, Wolf, which seeks to balance web site traffic among multiple servers, appears to rely on a *number of customers* on the various web sites as its measure of load on its web site servers (see, e.g., Wolf col. 8, lines 47-55 and col. 9, lines 40-46). Because Wolf relies on the number of customers to determine its load, its calculations are not dependent on “determin[ing] . . . expected computing time” as claimed. Furthermore, Wolf does not disclose a “demand forecast tree” as recited in the claims.

For at least the above reasons, Applicants respectfully request withdrawal of the § 102 rejections of claims 5-7.

V. CLAIM REJECTIONS UNDER 35 U.S.C. § 103

The Office Action rejected all pending claims (i.e., claims 1-3, 5-7, and 9-11) under 35 U.S.C. § 103(a) as being unpatentable over Fong et al. (US 6,366,945) (hereinafter “Fong”) in view of Behnens et al. (US 7,082,401) (hereinafter “Behnens”) and Prasanna (US 5,742,821) (hereinafter “Prasanna”). To establish a prima facie case of obviousness, the prior art reference, or references when combined, must teach or suggest all of the claim limitations. Applicants respectfully traverse the rejections because the cited references fail to teach or suggest all of the claim limitations.

Claims 1, 5, and 9. For example, claim 1 recites:

1. Computer implemented method for allocating to at least two computer servers a demand forecast application, the method comprising:
providing at least two computer servers;
determining, using a processor operatively coupled to the computer servers, **an expected computing time for each branch of a plurality of branches of a demand forecast tree having a single top level node with the plurality of branches directly emanating therefrom;**
allocating, using the processor, each branch of the plurality of branches to a task of a plurality of tasks based on the expected computing time for the branch, such that a total expected computing time for each task is substantially equal, wherein the total expected computing time for a task of the plurality of

tasks is determined by adding the expected computing time for each branch that is allocated to the task; and
for each task, distributing, using the processor, the task to a computer server of the at least two computer servers and executing the task on the computer server.

(emphasis added). Independent claims 5 and 9 recite similar limitations.

The Examiner acknowledges that Fong fails to teach a demand forecast tree model having a single top level node with a plurality of branches directly emanating therefrom. The Examiner also acknowledges that Fong fails to teach determining an expected computing time for each branch of the plurality of branches of the demand forecast tree. The Office Action cites Behrens FIGS. 2B elements 1174 and 1176, FIG. 3 element 3254, and cols. 6-7 for this subject matter and claims that it would have been obvious to combine Behrens and Fong. Applicants respectfully disagree that one skilled in the art would have combined Behrens with Fong, or that Behrens even discloses the limitations as claimed.

The Office Action has contended that it would have been obvious to combine Behrens with Fong. Applicants respectfully traverse this conclusion. Behrens, although disclosing allocating resources among a network, is directed to determining what special purpose *hardware* (e.g. multiplexers) to purchase and emplace (see Behrens abstract) in a digital subscriber line network. Fong, on the other hand, is directed to partitioning *software* to run on a general purpose computing network (see Fong abstract). Because Behrens is in a different field and is generally concerned with the purchase and placement of specific *hardware*, cable and multiplexing hardware that is so specialized that it bears little resemblance to the general purpose computers running the software partitioning scheme of Fong, one skilled in the art at the time of the invention would not have looked to Behrens for guidance and would have no motivation to combine the teachings of Behrens with the dynamic run-time partitioning of software of Fong. Furthermore, even if one were to combine the teachings of Behrens with the dynamic partitioning of Fong, the claim would not read on the result.

Behrens FIG. 2B is a display of *wire centers* linked to the geographic area based on the information access from a GIS database (Behrens col. 4, lines 40-42). Behrens FIG. 2B is reproduced below:

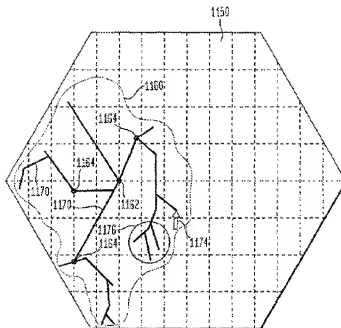


FIG. 2B of Behrens

In the figure, potential subscribers 1174 are connected by branches 1176 of *copper cables* 1170 (Behrens col. 4, lines 39-60). FIG. 2B does not disclose a **demand forecast tree**.

Behrens FIG. 3 depicts steps for determining customer demand, for which demand forecast 3254 is produced. However, demand forecast 3254 is depicted as a simple output block. There is no disclosure of a “demand forecast tree having a single top level node with the plurality of branches directly emanating therefrom” as recited. Similarly, Behrens cols. 6-7 discuss a demand forecast, but there is no disclosure of Behrens’ demand forecast having a single top level node with a plurality of branches directly emanating therefrom as claimed.

Moreover, Behrens as a whole does not disclose, teach, or suggest the limitations. Behrens’ demand forecast obtained from a demand forecasting model is used as an *input* to

produce a deployment map or demographically-driven network tree (or map) (Behrens col. 6, lines 46-53). As in input, there is no teaching or motivation that Behrens' demand forecast itself is a "demand forecast tree having a single top level node with the plurality of branches directly emanating therefrom" as recited.

Prassana is cited for determining an expected computing time for each branch of the plurality of branches of the demand forecast tree. Although Prassana attempts to equalize node/task finishing times using loop equations (e.g. Prassana col. 8, lines 42-45), Prassana does not disclose, teach, or suggest "determining . . . an expected computing time for each branch of a plurality of branches of a **demand forecast tree** having a single top level node with the plurality of branches directly emanating therefrom" (emphasis added) as recited. Prassana mentions neither demand forecast applications nor demand forecast trees. Instead, Prassana is directed to signal processing applications using matrix arithmetic computations (Prassana col. 1, lines 41-45). In Prassana's examples, "[a]ll tasks correspond to matrix operations. Operation sizes are determined by a simple count of the number of adds, multiplies, etc. performed" (Prassana col. 9, lines 2-4). Thus, Prassana's estimates of computation time for linear algebra matrices are distinct from sophisticated mathematical models for "determining . . . an expected computing time for each branch of a plurality of branches of a **demand forecast tree**" as recited.

Because the references Fong, Behrens, and Prassana fail to teach all of the limitations, no combination of the references can render the claims unpatentable under § 103. For at least the above reasons, Applicants respectfully request withdrawal of the rejections of the claims and all claims depending therefrom.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

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Amdt. dated March 8, 2010
Amendment under 37 CFR 1.116 Expedited Procedure
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PATENT

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mark Mathison', with a long horizontal stroke extending to the right.

Mark Mathison
Reg. No. 57,556

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 925-472-5000
Fax: 415-576-0300
MPM:cta
62486401 v1